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0,185

16 May 1957

MEMORANDUM FOR: THE RECORD

SUBJECT : Project Monitor at [redacted] 25X1

1. Time and Place of Meeting: May 9, 1957 at [redacted] 25X1

[redacted] 25X1

2. Attendance: [redacted] 25X1

3. Discussion:

a. [redacted] reported that the remaining three matching units had been fabricated and will be shortly shipped to APD. The remaining five shoebeel units also are almost completed. 25X1

The three microphones returned from Brussels (two type C and one type B) were briefly examined by [redacted] during the monitor. Initial response curves on two of the units look identical to the original curves. The third curve had some discrepancies and was being re-checked. The microphones will undergo an examination by [redacted] to determine if any structual changes have taken place. In discussing the problem of air shipment, [redacted] felt that there was a slight possibility that the reduced air pressure might damage the microphone diaphrags. [redacted] tries to seal the units as well as they can to improve the low frequency response characteristic, but felt that there may be enough air leakage present to equalize pressures when the mikes are air shipped. This question of air pressure will be mentioned to TSL and certainly their evaluation of the microphones will include looking into this point very carefully. [redacted] will also look into the problem during the study phase of the new microphone task presently underway. 25X1 25X1 25X1 25X1 25X1

The question of procuring 50 type B and 50 type CA units was discussed. [redacted] talked with [redacted] at [redacted] and felt that the job would be done there and that Mr. [redacted] would be in touch with the undersigned to work out the details prior to the writing of the proposal. 25X1 25X1 25X1

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b. [redacted] is finishing up the design of a line - circular ring microphone. This prototype will be about 12" in diameter and 17" long, and will consist of a series of line microphones spaced about the periphery of a circle in the form of a circular ring. It is hoped that this configuration will give the combination directional pattern of a 12" circular ring together with 17" line elements. If the pattern at 3000 cps is fairly good then the unit could be scaled up 3 times (and still not be too unwieldy) to get the desired pattern at 1000 cycles. 25X1

Attached is a brochure of the German MD-82 Tele-Microphone which was described in a recent newspaper article. As can be seen, this is a line element microphone similar in appearance to the [redacted] unit currently in our possession. In comparing the published directional curves at 1000 cycles to the curves obtained for the standard 24" condenser microphone built [redacted], it can be observed that the condenser unit has a slightly better directional efficiency. [redacted] pointed out that in general a line microphone of length L is not as directional as a piston type of diameter L. If the response of the 24" condenser at 600 cycles was obtained, the prediction is that the directional efficiency would be equal to the 40" line microphone at 1000 cycles. Although the line microphone presented has a good overall frequency response out to 10,000 cps, this particular characteristic is not desirable for remote pickup under poor signal-noise conditions. Tests initially run [redacted] indicate that for a poor signal to noise condition the response should be limited to between roughly 1000-2000 cps. 25X1 25X1 25X1 25X1

c. [redacted] reported that preliminary attempts at producing a sensitive miniature accoustic transducer have been only mildly successful. The magnetic type earphone he is working on is described as follows: 25X1

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[redacted] has fabricated his own miniature germanium diode which seems to be operating satisfactory. The diode impedance at the working voltage available is about 1000 ohms. However, the coil impedance he has gotten to date using #44 (2 Mil) wire is only about 70 ohms thus causing a poor match. Attempts will be made to wind the coil with 1½ or 1 mil wire to increase the impedance. The sensitivity of the earphone could be improved if a dc bias current could be obtained. However, in the limited space available this does not seem likely of accomplishment. 25X1

d. [redacted] has received all his chassis from the model shop and is currently engaged in lining up and adjusting all the channels. A systematic test procedure is being worked out so that an evaluation of the system can be obtained. The first series of tests will consist of general listening to speech mixed with controlled noise first without the system and then with it. 25X1

[redacted] 25X1

Attachment:
Brochure

Distribution:
P-189
P-119 w/attachment
P-202
P-185
Chrono

SPK/mm

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